

IN THE CLAIMS:

Please amend the claims as follows:

1. (Canceled)
2. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a number of comparators corresponding to the resolution of the quantizer is provided, the comparators having uniformly graduated threshold voltages or threshold currents.
3. (Canceled)
4. (Previously Presented) The quantizer as claimed in Claim 3, wherein a reference voltage generator is provided which generates the threshold signal voltages, which are different for each voltage comparator, the threshold signal voltages being selectable in part voltages, the threshold signal exhibiting, in particular, fixed differences with respect to one another.

5. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein ~~[[the]]~~ an adder is associated with a switching mechanism which has switches at the inputs of which the part voltages of the reference voltage generator are present and the outputs of which are connected to the inputs for the threshold signal voltages of the comparators, the switches being controlled by the output signal of the adder.
6. (Currently Amended) A sigma delta modulator comprising a quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage

or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output.

7. (Currently Amended) A sigma delta modulator comprising a signal input at which an evaluation signal to be evaluated is present, and a digital result output which outputs a digital result value, a quantizer being provided which quantizes an input signal ~~present at it~~ in accordance with at least one threshold voltage and outputs it as a result value at the digital result output, the quantizer being preceded at its input by at least one preliminary stage, which comprises an adder, processing a preliminary stage input signal with an integrator following the adder in the signal path and supplying a preliminary stage output signal, the adder being supplied with a feedback signal, generated in dependence on the result value for addition to the preliminary stage input signal, the evaluation signal being present as preliminary stage input signal at a first preliminary stage and the preliminary stage output signal of the in each case previous preliminary stage in the signal path being present as preliminary stage input signal at each further preliminary stage, the last preliminary stage before the quantizer supplying the input signal to the quantizer as preliminary stage output signal, wherein the quantizer exhibits a number of comparators corresponding to the number of threshold voltages, which compare the input signal with the respective threshold voltage, the threshold voltage being reduced or increased

by a correction voltage, the correction voltage being generated in accordance with the result value output at the result output.

8. (Previously Presented) The sigma delta modulator as claimed in Claim 7, wherein a digital/analog converter is provided which generates an analog rough signal from the digital result value.
9. (Canceled)
10. (Previously Presented) The sigma delta modulator as claimed in claim 7, wherein the correction voltage is a voltage corresponding to the result value multiplied by a fixed factor.
11. (Canceled)
12. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a digital/analog converter is provided which generates the voltage corresponding to the result value.

13. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a digital adder is provided which adds the factor to the result value and connects a previously generated threshold voltage, corresponding to the result, to the comparators.
14. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein the sigma delta modulator is of second order with two preliminary stages.

15. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein the sigma delta modulator is a continuous-time sigma delta modulator.

16. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a device for editing the output signals of the adder is provided.

17. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a number of comparators corresponding to the resolution of the quantizer is provided, the comparators exhibiting uniformly graduated threshold voltages.
18. (Currently Amended) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal ~~present at it~~ in accordance with at least one threshold signal and outputting ~~it as~~ a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a reference voltage generator is provided which supplies part voltages, from which the threshold voltages are generated.

19. (New) A quantizer for a sigma delta modulator comprising at least one preliminary stage, the quantizer quantizing an input signal in accordance with at least one threshold signal and outputting a result value at a digital result output, wherein the quantizer has a number of comparators corresponding to the number of threshold signals, which compare the input signal with the respective threshold signal, the threshold signal being reduced or increased by a correction voltage or a correction current, the correction voltage or correction current being generated in accordance with the result value output as the result output,

wherein a number of comparators corresponding to the resolution of the quantizer is provided, the comparators having uniformly graduated threshold voltages or threshold currents, and

wherein the quantizer has a number of voltage comparators corresponding to the number of its resolution intervals, the voltage comparators comparing the input signal present as input signal voltage with an associated threshold signal voltage and, if the input signal voltage exceeds or drops below the threshold signal voltage, outputting a corresponding digital result bit (0/1), a digital adder being provided which adds the digital result value of the last weighting of the comparators of the quantizer to the individual threshold signal voltages of the

comparators by increasing or reducing the threshold signal voltages by part voltages corresponding to the digital result value.

20. (New) A sigma delta modulator comprising a signal input at which an evaluation signal to be evaluated is present, and a digital result output which outputs a digital result value, a quantizer being provided which quantizes an input signal in accordance with at least one threshold voltage and outputs a result value at the digital result output,

the quantizer being preceded at its input by at least one preliminary stage, which comprises an adder, processing a preliminary stage input signal with an integrator following the adder in the signal path and supplying a preliminary stage output signal, the adder being supplied with a feedback signal, generated in dependence on the result value for addition to the preliminary stage input signal,

the evaluation signal being present as preliminary stage input signal at a first preliminary stage and the preliminary stage output signal of the in each case previous preliminary stage in the signal path being present as preliminary stage input signal at each further preliminary stage, the last preliminary stage before the quantizer supplying the input signal to the quantizer as preliminary stage output signal,

wherein the quantizer exhibits a number of comparators corresponding to the number of threshold voltages, which compare the input signal with the respective threshold voltage, the threshold voltage being reduced or increased

by a correction voltage, the correction voltage being generated in accordance with the result value output at the result output,
wherein a digital/analog converter is provided which generates an analog rough signal from the digital result value, and
wherein the rough signal is in each case multiplied by a predetermined factor to the respective feedback signal of a preliminary stage corresponding to the position and the number of preliminary stages in the signal path.

21. (New) A sigma delta modulator comprising a signal input at which an evaluation signal to be evaluated is present, and a digital result output which outputs a digital result value, a quantizer being provided which quantizes an input signal in accordance with at least one threshold voltage and outputs a result value at the digital result output,
the quantizer being preceded at its input by at least one preliminary stage, which comprises an adder, processing a preliminary stage input signal with an integrator following the adder in the signal path and supplying a preliminary stage output signal, the adder being supplied with a feedback signal, generated in dependence on the result value for addition to the preliminary stage input signal,
the evaluation signal being present as preliminary stage input signal at a first preliminary stage and the preliminary stage output signal of the in each case previous preliminary stage in the signal path being present as preliminary stage input signal at each further preliminary stage, the last preliminary stage before

the quantizer supplying the input signal to the quantizer as preliminary stage output signal,

wherein the quantizer exhibits a number of comparators corresponding to the number of threshold voltages, which compare the input signal with the respective threshold voltage, the threshold voltage being reduced or increased by a correction voltage, the correction voltage being generated in accordance with the result value output at the result output,

wherein the correction voltage is a voltage corresponding to the result value multiplied by a fixed factor, and

wherein the factor is a simple fraction.